

PATENT COOPERATION TREATY

REC'D 14 JUL 2005

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PAT

PCT

From the
INTERNATIONAL SEARCHING AUTHORITY

To:
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WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing
(day/month/year) 12 JUL 2005

Applicant's or agent's file reference

96700/938

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/US04/42418

International filing date (day/month/year)

16 December 2004 (16.12.2004)

Priority date (day/month/year)

16 December 2003 (16.12.2003)

International Patent Classification (IPC) or both national classification and IPC

IPC(7): A61K 38/00 and US Cl.: 514/9

Applicant

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1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/ US

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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US04/42418

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

☒ a sequence listing

☐ table(s) related to the sequence listing

b. format of material

☐ in written format

☒ in computer readable form

c. time of filing/furnishing

☒ contained in international application as filed.

☒ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US04/42418

Box No. V Reasoned statement under Rule 43 bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)

Claims 1-71 YES

Claims NONE NO

Inventive step (IS)

Claims 1-71 YES

Claims NONE NO

Industrial applicability (IA)

Claims 1-71 YES

Claims NONE NO

2. Citations and explanations:

Claims 1-71, are novel under PCT Article 33(2). The prior art of record did not reasonably teach the compounds of the present invention; namely compounds comprising SEQ ID NOS: 1-3, 10 and/or 12 with the functional limitation of capable of binding a BCL6 lateral peptide groove; blocking corepressor binding of BCL6 using the same; inhibiting BCL6 repression in a mammalian cell compounds using the same; a method of treating a mammal with cancer, wherein the cancer requires BCL6 repression using the same; a peptide comprising or consisting of SEQ ID NO: 12 or a polynucleotide encoding the same or vector comprising the latter; or a method of determining whether a test compound inhibits corepressor binding to BCL6. as drawn to a peptide compound inhibitors and compositions and methods of using thereof. Two general teachings in the art, cited in the search report, were Morris et al. and Dalla-Favera et al. Morris et al. generally teaches peptides comprising one or more of SEQ ID NO: 1-3, and/or 10 (see i.e. claim 5, entire document); however, the reference made no reference to use in BCL6 functionally binding compounds or methods of using the same where BCL6 is bound. Dalla-Favera et al. generally teach amino-terminal peptides of BCL-6 (para 0385); however, the reference does not teach any of SEQ ID NOS: 1-3, 10, and/or 12, nor lend any indication that these peptides stem from this region of BCL6.

Claims 1-71 also involve an inventive step under PCT Article 33(3). The prior art of record did not reasonably suggest the compounds of the present invention; namely compounds comprising SEQ ID NOS: 1-3, 10 and/or 12 with the functional limitation of capable of binding a BCL6 lateral peptide groove; blocking corepressor binding of BCL6 using the same; inhibiting BCL6 repression in a mammalian cell compounds using the same; a method of treating a mammal with cancer, wherein the cancer requires BCL6 repression using the same; a peptide comprising or consisting of SEQ ID NO: 12 or a polynucleotide encoding the same or vector comprising the latter; or a method of determining whether a test compound inhibits corepressor binding to BCL6. The prior art of record does not provide any motivation to combine the teachings of Morris et al. or Dalla-Favera et al. to arrive at the present claimed invention.

Claims 1-71 have industrial applicability under PCT Article 33(4) since the peptide compound may be used to treat cancer requiring BCL6 repression.